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95.07.13 95JP-177444 *(97.01.28)* C12N 15/09, C07H 21/04, C12N 1/21, 9/04 (C12N 15/09, C12R 1:91) (C12N 1/21, C12R 1:19) (C12N 9/04, C12R 1:91) (C12N 9/04, C12R 1:19)

(Pro)phenol oxidase derived from a domestic silkworm - useful as a labelling oxidase and in pro-phenol oxidase activation system for detection of microorganisms

C97-047464

Prophenol oxidase or phenol oxidase having the 685 or 634 amino acid sequences given in the specification respectively, are new.

Also claimed are:
(1) DNA's encoding the above prophenol oxidase or phenol oxidase, based on the 2408 bp sequence given in the specification;
(2) a recombinant vector contg. the DNA's of (1);
(3) host cells transformed with the recombinant vector of (2); and
(4) prodn. of the above prophenol oxidase or phenol oxidase by culturing the host cells and recovering the enzyme from the resulting culture.

B(4-E3E, 4-E8, 4-F1E, 4-L3A) D(5-C3B, 5-H4, 5-H12A, 5-H12E, 5-H17A3) .4

USE

The prophenol oxidase and phenol oxidase are derived from a domestic silkworm. The phenol oxidase may be used as a novel labelling oxidase. The elucidation of the primary structure of the prophenol oxidase will contribute to the reconstitution of a prophenol oxidase activation system which can be applied to the detection of microorganisms by measurement of β-1,3-glucan and peptide glycan.

PREPARATION

Prodn. of the prophenol oxidase or the phenol oxidase is carried out according to conventional genetic means, i.e. by cloning the DNA in a plasmid, transformation of hosts with the plasmid, and prodn. of the oxidase in the hosts.

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